

REMARKS

The Office Action mailed 13 May 2004 has been received and considered. Responsive to the indications of the Examiner has amended the specification and claims in order to place the application in condition for allowance. Reconsideration of the application is requested.

DOUBLE PATENTING REJECTION:

Claims 32-69 stand provisionally rejected under 35 USC 101 in view of applicant's co-pending US Application No. 10/691,339. Further, claims 32-69 stand provisionally rejected under 35 USC 101 in view of applicant's second co-pending application, namely US Application No. 10/666,419. Applicant respectfully traverses the two rejections.

Each of the two referenced applications have become abandoned. It follows that neither application may presently serve as a basis for a rejection under 35 USC 101. In view of these considerations, applicants respectfully request that the instant rejections be withdrawn.

Claims 32-69 stand provisionally rejected under the doctrine of obviousness-type double patenting over claims 32-69 of co-pending application No. 10/691,339. Claims 32-69 also stand rejected under the doctrine of obviousness-type double patenting over claims 32-69 of co-pending application No. 10/666,419. Applicants respectfully traverse the instant rejections. As noted above, each of these two co-pending applications have now been abandoned. In view of this fact applicants respectfully submit that neither reference can serve as a proper basis for a rejection under the doctrine of obviousness-type double patenting. Applicants respectfully request that the two rejections be withdrawn.

CLAIM REJECTIONS UNDER 35 USC 112:

Claims 32-69 stand rejected under 35 USC 112 as failing to comply with the written description requirement. Applicant respectfully traverses the instant rejection.

The Examiner maintains that the specification, as filed, failed to include a reference to “unwashed” or “non-elutriated” coal or coal fines. Applicants respectfully disagree with the Examiner’s determination.

Applicants maintain that the application as originally filed did in fact disclose the limitation that the fines should not be subjected to elutriation. This disclosure may be found in a number of locations in the original application as filed. Specifically the original Claim 1 indicated at lines 3-4, the limitation of “displacing **without elutriation** a mixture of low grade non-coking coal fines and another type of inexpensive carbonaceous fines” (emphasis added). Claim 10 lines 3-4 read as follows: “displacing a mixture of low grade coal fines and another type of carbonaceous comprising waster coke fines **without elutriation** of the fines as a feed stock influent”. Claim 19, lines 4-5 also refer to the limitation of processing the coal fines without elutriation. Claim 19 read: “displacing **without elutriation** the mixture of lower grade coal fines and waster coke fines” Finally, claim 30 also refers to the limitation of isolating the mixture from elutriation.

It is a matter of established case law that the claims of an originally-filed specification are part of the disclosure for purposes of determining compliance with the Section 112 disclosure requirements. See *Chisum on Patents*, Section 11.04(2)(b) page 11-245, footnote 24. In *Ex parte Gould*, 6 USPQ2d 1680,1681 (1987) the Board of Patent Appeals & Interferences wrote that “a review includes a consideration of both the specification and the original claims constituting part of the original disclosure”. The Court of Appeals for the Federal Circuit also affirmed this reasoning when it wrote in *In re Benno*, 226 USPQ 683, 686-687 (1985) that “where a patent application, as filed, contains a claim which specifically discloses something not disclosed in the descriptive part of the specification (claims being technically part of the ‘specification.’ 35 USC 112, 2d paragraph)... the applicant may amend the specification without being charged with adding ‘new matter’ within the meaning of Section 132.” Following the reasoning of both the Board of Appeals and the CAFC, the instant application included a specific disclosure that the fines mixture should not be subjected to elutriation. This reference was found in a number of locations within the claims of the as filed application. Since the claims form part of the original disclosure of the application, the application did in fact contain a proper disclosure of the

elutriation limitation. In order to meet the Examiner's concerns, applicants have, by the instant response, amended the specification at page 10 to include a reference to elutriation.

In view of applicants' original disclosure having included a proper reference to the elutriation limitation and further in consideration of applicants' having amended the specification of the application to specifically include a reference to this limitation to support the pending claims, applicants respectfully request that the rejection under 35 USC 112 be withdrawn.

REJECTION UNDER 35 USC 103:

Claims 32-37, 40-46, 48-53, 55-57 and 59-69 stand rejected under 35 USC 103(a) over Weber et al. in view of Loebell. Applicants respectfully traverse the rejection.

Each of the aforesaid claims is directed to a method which includes introducing a mixture of low grade non-coking coal fines and waste coke fines into a pyrolizer and producing a coke product. Applicants respectfully submit that none of the cited references, either individually or in combination, teach or suggest combining low grade non-coking coal fines and waste coke fines to produce a coke product.

The Weber et al reference teaches the use of "fine" coal to produce briquettes. It should be noted that Weber et al is using the word "fine" as an indicator of size. Specifically, Weber et al. are utilizing this term to denote that the coal is in the form of small grains, typically having a size of between 0 and 10 mm. (col. 2, lines 11-12.). A distinction should be made at this juncture between "fine coal" and "coal fines" as these two terminologies are used in the art. "Fine coal" as used in the Weber et al reference relates to coal having a very small grain size. Coal can be made into "fine coal" merely by crushing the coal until the coal obtains the requisite small grain size. In contrast, "coal fines" refers to a waste product. This waste product typically results from the mining of coal.

The disclosure of Weber et al appears to be directed to the use of “fine coal” e.g., high quality coal which has been reduced by crushing to a small grain size, i.e. 0 to 10 mm. Weber et al. does not appear to teach or suggest the use of “coal fines” in his process.

The second component of the mixture formed under applicants’ claimed process is waste “coke fines”. This particular material is the byproduct of coke manufacture, i.e. it is the residue from the screening of heat treated coke. Here again, the Weber et al reference does not appear to teach nor suggest the use of this particular coke fines byproduct material as a constituent ingredient in its process for manufacturing briquettes. At most, Weber et al teaches the use of mixtures of “fine coals” to produce the briquettes. (See col 2, line 10-11).

Loebell appears directed to producing briquettes from a mixture of a non-coking coal and a normally solid bituminous binder material (See page 1, lines 88 - 91). Loebell does not appear to teach nor suggest combining waste coal fines with waste coke fines to form a mixture and then subsequently combining this mixture with a binder.

The instant claims also require a limitation that the mixture of the coal fines with the coke fines should not be subjected to elutriation. The Examiner maintains that the elimination of an elutriation step in applicants’ claims is taught in the Loebell reference. Applicants respectfully disagree.

Loebell teaches at page 2, lines 24-27 that the mixture of the coal and the binder “should preferably be dried in any well known manner prior to the carbonization.” On page 2, lines 128-130, Loebell indicates that in preparing the fuel mixture to be briquetted, the various ingredients are dried to a moisture content of about 2%. Loebell’s instructions to dry the fuel material prior to carbonization would imply that the fuel materials had previously been subjected to some type of elutriation or washing. Applicants submit that the presence of instructions to dry the fuel materials prior to their carbonization can not be understood to teach or suggest that the fuel materials are not to be subjected to elutriation. In fact, applicants submit that such instructions would suggest the opposite, i.e. that according to the Loebell disclosure the fuel materials should

be elutriated or washed prior to their processing, else why would there be a need to dry those materials..

As noted by the Examiner, the Weber et al reference teaches that the fuel mixture should be elutriated /washed and thereafter dried. (See col 2, lines 3-20). Applicants can identify no suggestion or teaching in either the Weber et al reference or the Loebell reference which would suggest that this elutriation/washing step should be eliminated. Instead, Weber et al teaches the need for such a elutriation step including the need for subsequent drying of the fuel material. Although Loebell doesn't mention the need to elutriate the fuel material, Loebell describes the need to dry the fuel material, leading to the presumption that Loebell likewise is elutriating the fuel material prior to carbonization and thereby encountering a subsequent need to dry the material. In view of these teachings, applicants respectfully submit that any combination of the two references would neither teach or suggest the need to avoid elutriation of the fuel mixture. Further, a fair reading of both of the references does not appear to disclose or suggest any motivation to modify the Weber et al requirement of elutriation. Instead, the Loebell reference, by referring to the need to dry the fuel material, should be read as generally reinforcing the Weber et al requirement that the fuel mixture be elutriated.

The Examiner has cited the language on page 12 of Applicants specification, i.e. that the mixture of coal/coke fines are "cleaned" as being an indication that applicants' method inherently involves elutriation. The examiner relies on the Leller reference to support her position. Applicants respectfully disagree. As noted above, the original application as filed included a specific indication that the fuel mixture was not to be subjected to elutriation. Although applicants' specification may indicate that the fines are cleaned, such an indication does not necessarily mean that such cleaning is to be effected by means of elutriation. The instant application must be read in its entirety giving fair meaning to all of the indications within the four corners of the application. It follows that applicants' indication that the mixture of fines is not to be subjected to elutriation must be read together with the indication that the mixture is to be cleaned. It follows that a joint reading of these two indications would signify that the mixture was to be cleaned by a method other than elutriation. To read the specification otherwise would be to disregard one teaching for another without a clear instruction to do so.

In view of the above considerations, applicants respectfully submit that the indicated claims are neither taught nor suggested by the Weber et al and Loebell references, either individually or in combination. The cited references do not appear to teach the combination of waste coal fines with waste coke fines in a process wherein that combination is not subjected to elutriation. Resultingly, applicants respectfully request the withdrawal of the rejections under 35 USC 103(a).

With reference to the rejection of claim 65, applicants submit that the use of “all” condensed tar as a binder and “all” combustible off-gas to fuel the pyrolyzer were not obvious at the time the invention was made.. Although in hindsight it may appear that such maximized utilization of the byproducts of the instant process would be desirable, applicants submit that until their instant invention, no one had demonstrated an achievable process to obtain such a maximized utilization. In the single reference cited by the Examiner which includes a discussion of reintroducing pyrolytic byproducts back into the mixture being processed Weber et al. discloses that such a result is in fact not achievable utilizing the Weber et al process. At col. 3, lines 7-11, Weber et al indicate that their process produces a large amount of gas of high calorific value, **“a part of which can be used in the process itself for heating purposes. Beyond that, excess gas of high calorific value is available for free disposal”**. Weber et al therefore indicates that their process produces an excessive amount of exhaust gas which is discharged through excess line 78. See col. 7, line 29-30. Further evidence of this excess is demonstrated in Weber et al.’s Example at col. 7, lines 11-18, wherein the text indicates that over half of the gas produced in the Weber et al process is in excess of that needed to fuel the pyrolyzer.

Weber et al appears to reflect the efforts made by those in the art to achieve a maximized utilization of byproducts produced in the pyrolyzation process. Applicants respectfully submit that given the evidence of Weber et al.’s process, applicants’ achievement in providing a process which does in fact achieve a non emission of exhaust gas is not an obvious result. Applicants’ achieved their nonemission of exhaust gas by carefully selecting the components of their fuel mixture such that the reaction in the pyrolizer produced only that amount of exhaust gas which could be utilized as fuel for the pyrolizer.

Secondly, applicants further utilized its novel combination of fuel mixture components to produce only that amount of tar by product which would be subsequently required to maintain a continuous operation of the process. Here again, reference to the Weber et al reference demonstrates how difficult it is to obtain this desired production of tar byproduct. At col. 7, lines 30-47, Weber et al disclose that the tar produced in the first cooling stage of their process is directed to the mixing tank 95 for use as a binder. However, the tars produced in the second cooling stage 81 and the final cooling stage 109 are not utilized in the process, but are instead discharged as waste products at points 108 and 117. (See Fig. 2). As noted in applicants' specification, one of the principal problems associated with coke production is the byproduct production of waste products, be that tars or exhaust gases, Such byproducts may be disposed of in landfills or discharged into the environment. Applicants have devised a process which on one hand utilizes waste coal and coke products, which historically have been discarded and deposited in landfills, to manufacture a high quality coke product, and furthermore, applicants produce that coke product by means of a process which forms a "closed material loop", i.e. the by product materials generated during the continuous process are reintroduced into the process to maintain the continuous operation of the process while avoiding the creation of environmental problems resulting from the need to dispose of such byproducts. In view of these considerations, applicants submit that the subject matter of claim 65 is not obvious.

Claim 66 requires that the tar produced in the process forms the sole source for the binder used in the process and further that the off gas produced by the process is the sole source of fuel for the pyrolizer. Applicants submit that the cited references provide no teaching or suggestion of these claim limitations. The Weber et al reference teaches the need for an external source (95) of bitumen for use in forming the binder. Weber et al gives no indication that their process is capable of generating all of the binder material necessary for maintaining a continuous process. The other cited references do not appear to address the claimed objective either. In view of these considerations, applicants submit that claim 66 distinguishes over the art of record and is not obvious over that art.

Claims 38, 39, 47 and 54 are rejected under 35 USC 103(a) over Weber et al in view of Loebell and further in view of Nicaud et al. Applicants respectfully traverse the rejection. As

noted above, neither Weber et al nor Loebell appear to disclose a process in which a mixture of noncoking coal fines is mixed with waste coke fines and the mixture is thereafter not subjected to elutriation. Each of the rejected claims includes these particular limitations. Nicaud is directed for a process of degrading thermoplastic polyolefins and resulting does not appear to address the subject of producing coke through use of coal fines and coke fins. Nicaud does not appear to rectify the deficiencies noted above relative to Weber et al and Loebell. In view of this reasoning, applicant submits that the rejection under 35 USC 103(a) must be withdrawn.

Claim 58 is rejected under 35 USC 103(a) over Weber et al in view of Loebell in view of Deering et al. Deering et al does not appear to rectify any of the deficiencies noted above with reference to the rejection of claims 38, 39, 47 and 54, i.e. the disclosure of a mixture of noncoking coal fines with coke fines and the subsequent nonexposure of that mixture to elutriation. In view of this consideration, applicants respectfully submit that the rejection of claim 58 must be withdrawn.

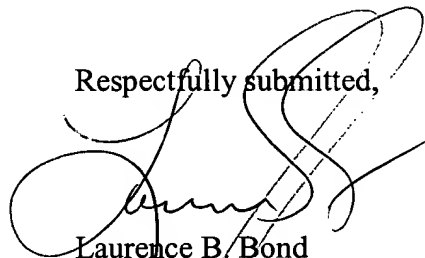
NEWLY ADDED CLAIMS:

By this amendment, applicant has introduced a series of new claims directed to a process wherein the relative amounts of coal fines and coke fines are adjusted during the mixing process whereby the tar and off gas to be produced by the pyrolyzation of that mixture will produce a sufficient amount of tar to serve as a binder for the ongoing continuous operation of the process and a sufficient amount of off gas to fuel the pyrolyzer. These claims define a continuous process which defines a contained material loop which produces only that amount of byproducts required in order to enable the process to proceed while not creating waste by products which would require disposal. Further, the process provides the user with the means of producing a high quality coke product utilizing waste materials which would otherwise be consigned to waste landfills. Applicants submit that the newly added claims define over the cited art and hereby request examination of the newly submitted claims.

CONCLUSION:

In view of the considerations indicated above, applicants respectfully submit that the pending claims of the application define over the cited art. Withdrawal of the outstanding rejections is therefore requested. Examination of the new claims submitted by this Amendment is also requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Laurence B. Bond', is written over the typed name and extends upwards into the 'Respectfully submitted,' line.

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